NEW CONSTRUCTION PERMIT
AND MINOR SOURCE OPERATING PERMIT
OFFICE OF AIR QUALITY

KYB Manufacturing North America, Inc.
2625 North Morton
Franklin, Indiana 46131

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 081-12622-00015	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: December 21, 2001

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This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary hard chrome electroplating plant used to manufacture piston rods for automotive struts.

Authorized Individual:	Ms. Judy Witkemper
Source Address:	2625 North Morton, Franklin, Indiana 46131
Mailing Address:	2625 North Morton, Franklin, Indiana 46131
Phone Number:	317-736-7774
SIC Code:	3710
County Location:	Johnson
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to construct and operate the following emissions units and pollution control devices:

(a) One (1) hard chrome electroplating line (identified as P-1), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H300-A.

(b) One (1) hard chrome electroplating line (identified as P-2), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H200-A.

(c) Four (4) spray paint booths, identified as FA-1, FA-2, FA-3 and FA-4, each using an electrostatic air atomization spray gun and with particulate matter emissions controlled using dry filters. The maximum throughput capacity for each spray booth is as follows:

(1) FA-1 has a maximum throughput capacity of 206 metal parts per hour, exhausting at stacks E300-PB and E300-TU;

(2) FA-2 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack J400-TU;

(3) FA-3 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack K220-TU; and

(4) FA-4 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack L220-TU.

(d) Two (2) dip coating lines, identified as E-Coat 1 and E-Coat 2, having maximum throughput capacities of 550 outer shells per hour and 600 outer shells per hour, respectively.

(e) Five (5) natural gas-fired boilers:

(1) E-Coat 2 Process Boiler, constructed in June 1997, having a maximum heat input capacity of 3.5 MMBtu/hour, exhausting at stack P 100-21G;

(2) Space Heating Boiler No. 1, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L85090;

(3) Space Heating Boiler No. 2, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L-85091;

(4) E-Coat 1 Process Boiler No. 1 (identified as EC1-J300-22A), constructed in June 1991, having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22A;

(5) E-Coat 1 Process Boiler No. 2 (identified as EC1-J300-22B), constructed in June 1991, having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22B;

(f) Eleven (11) natural gas-fired heaters and ovens:

(1) E-Coat 1 Cure Oven (identified as EC1-J300-22D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stack J300-22D;

(2) E-Coat 2 Cure Oven (identified as EC2-P100-21D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stacks P100-21D, P100-21E and P100-21F;

(3) Strut Line FA1 Dry-off Oven (identified as FA1-E300-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E300-OV;

(4) Strut Line FA1 Cure Oven (identified as FA1-E400-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E400-OV;

(5) Strut Line FA2 Cure Oven (identified as FA2-J400-OV) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack J400-OV;

(6) Strut Line FA3 Hot Water Heater (identified as FA3-K220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack K220-G;

(7) Strut Line FA3 Cure Oven (identified as FA3-K220-OV) having a maximum heat input capacity 0.30 MMBtu/hour, exhausting at stack K220-OV;

(8) Strut Line FA4 Hot Water Washer (identified as FA4-L220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack L220-G;

(9) Strut Line FA4 Cure Oven (identified as FA4-L220-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack L220-OV;

(10) Strut Line FA5 Washer Heater (identified as FA5-M230-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack M230-G;

(11) Strut Line FA6 Washer Heater (identified as FA6-N210-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack N210-G; and

(g) One (1) natural gas-fired burn-off oven (identified as BO-OV) having a maximum heat input capacity of 0.80 MMBtu/hour, with emissions controlled using an afterburner, exhausting at stack BO-OV.

(h) One (1) hard chrome electroplating line (identified as P-3), constructed in 2001, consisting of three (3) rectifiers each having a maximum capacity of 15,000 Amps, with emissions controlled using a composite mesh pad wet scrubber system. This electroplating line has a maximum throughput capacity of 1,000 piston rods per hour. Emissions are exhausted at stack H400-A.

SECTION B GENERAL CONSTRUCTION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Modification to Permit [326 IAC 2]

Notwithstanding the Section B condition entitled “Minor Source Operating Permit”, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.6 Minor Source Operating Permit [326 IAC 2-6.1]

This document shall also become a minor source operating permit pursuant to 326 IAC 2-6.1 when, prior to start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.

(1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

(2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.

(b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

(d) The operation permit will be subject to annual operating permit fees pursuant to

326 IAC 2-1.1-7(Fees).

(e) Pursuant to 326 IAC 2-6.1-7, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied. The operation permit issued shall contain as a minimum the conditions in Section C and Section D of this permit.

B.7 NSPS Reporting Requirement

Pursuant to the New Source Performance Standards (NSPS), Part 60, Subpart Dc, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

(a) Commencement of construction date (no later than 30 days after such date);

(b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

(c) Actual start-up date (within 15 days after such date); and

(d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM, OAQ. The requirements of 40 CFR Part 60 are also federally enforceable.

B.8 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications or amendments of this permit do not affect the expiration

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit for all criteria pollutants is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Testing Requirements

C.8 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.9 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.10 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.11 Compliance Response Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CPR shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintain on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at anytime, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned to operating within “normal” parameters and no response steps are required.

(d) The Permittee shall record all instances when response steps are taken.

(e) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

Record Keeping and Reporting Requirements

C.12 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality(OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.13 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015

Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description:

(a) One (1) hard chrome electroplating line (identified as P-1), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H300-A.

(b) One (1) hard chrome electroplating line (identified as P-2), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H200-A.

(h) One (1) hard chrome electroplating line (identified as P-3), constructed in 2001, consisting of three (3) rectifiers each having a maximum capacity of 15,000 Amps, with emissions controlled using a composite mesh pad wet scrubber system. This electroplating line has a maximum throughput capacity of 1,000 piston rods per hour. Emissions are exhausted at stack H400-A.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-6.1-5(1)

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 20-1-1, apply to the facilities described in this section except when otherwise specified in 40 CFR Part 63, Subpart N. The permittee shall comply with the requirements of this condition on and after the compliance date for the tanks.

D.1.2 Chromium Electroplating and Anodizing NESHAP [326 IAC 20-8-1] [40 CFR Part 63, Subpart N]

The provisions of 40 CFR 63, Subpart N - National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, which are incorporated by reference as 326 IAC 20-8-1, apply to electorplating lines P-1, P-2, and P-3. A copy of this rule is attached. The permittee shall comply with the requirements of this condition on and after the compliance date for each tank.

D.1.3 Chromium Emissions Limitation [40 CFR 63.342(c)] [40 CFR 63.343(a)(1)&(2)] [326 IAC 20-8-1]

(a) The emission limitations in this condition apply during tank operation and during periods of startup and shutdown as these are routine occurrences for tanks subject to 326 IAC 20-8-1. The emission limitations do not apply during periods of malfunction.

(b) The hard chromium electroplating tanks on electroplating lines P-1 and P-2 are considered large, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm [6.6×10^{-6} gr/dscf].

(c) The hard chromium electroplating tanks on electroplating line P-3 is considered a large, new hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not

allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm [$6.6x10^{-6}$ gr/dscf].

D.1.4 Work Practice Standards [40 CFR 63.342(f)] [326 IAC 20-8-1]

The following work practice standards apply to the electroplating lines P-1, P-2, and P-3:

(a) At all times, including periods of startup, shutdown, malfunction and excess emissions, the Permittee shall operate and maintain the electroplating tanks on lines P-1, P-2 and P-3, including the composite mesh pad wet scrubbers, and any monitoring equipment, in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.6.

(b) Malfunctions and excess emissions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.6.

(c) These operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in this section.

(d) Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to IDEM, OAQ, which may include, but is not limited to, monitoring results; review of the OMP, procedures, and records; and inspection of the source.

(e) Based on the results of a determination made under paragraph (d) of this condition, IDEM, OAQ may require that the Permittee make changes to the OMP required by Condition D.1.6. Revisions may be required if IDEM, OAQ finds that the plan:

(1) Does not address a malfunction or period of excess emissions that has occurred;

(2) Fails to provide for the operation of the electroplating tanks on electroplating lines P-1, P-2, and P-3, the composite mesh pad wet scrubbers, and process monitoring equipment during a malfunction or period of excess emissions in a manner consistent with good air pollution control practices; or

(3) Does not provide adequate procedures for correcting malfunctioning process equipment, the composite mesh pad wet scrubbers on electroplating lines P-1 and P-2 and P-3, monitoring equipment, or other causes of excess emissions as quickly as practicable.

For electroplating tanks on electroplating line P-3, the permittee shall comply with the requirements of this condition on and after the start-up date of the electroplating tanks.

The work practice standards that address operation and maintenance must be followed during malfunctions and periods of excess emissions.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section B-Preventive Maintenance Plan, of this permit, is required for electroplating lines P-1, P-2, and P3 and the control devices.

D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)] [326 IAC 20-8-1]

(a) The Permittee shall prepare an Operation and Maintenance Plan (OMP) to be implemented no later than the startup date of electroplating tanks on electroplating lines P-1, P-2, and P-3. The OMP shall specify the operation and maintenance criteria for the tanks, the air pollution control devices, and monitoring equipment and shall include the following elements:

(1) For the composite mesh-pad system (CMP):

(A) Quarterly visual inspections of the device to ensure there is proper drainage, no chromic acid buildup on the pads, and no evidence of chemical attack on the structural integrity of the device.

(B) Quarterly visual inspection of the back portion of the mesh pad closest to the fan to ensure there is no breakthrough of chromic acid mist.

(C) Quarterly visual inspection of the duct work from the tank to the control device to ensure there are no leaks.

(D) Perform washdown of the composite mesh-pads in accordance with manufacturers recommendations.

(2) A standardized checklist to document the operation and maintenance criteria for tanks on electroplating lines P-1, P-2, and P-3, the air pollution control device, the add-on air pollution control device and the monitoring equipment.

(3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions or periods of excess emissions as indicated by monitoring data do not occur.

(4) A systematic procedure for identifying malfunctions and periods of excess emissions of tanks on electroplating lines P-1, P-2, and P-3, the air pollution control device, the add-on air pollution control device and monitoring equipment; and for implementing corrective actions to address such malfunctions and periods of excess emissions.

(b) The Permittee may use applicable standard operating procedures (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans such as the PMP required in Condition D.1.5, as the OMP, provided the alternative plans meet the above listed criteria in Condition D.1.6(a).

(c) If the OMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction or period of excess emissions at the time the plan is initially developed, the Permittee shall revise the OMP within forty-five (45) days after such an event occurs. The revised plan shall include procedures for operating and maintaining tanks on electroplating lines P-1, P-2, and P-3, the air pollution control device, the add-on air pollution control device and the monitoring equipment, during similar malfunction or period of excess emissions events, and a program for corrective action for such events.

(d) If actions taken by the Permittee during periods of malfunction or period of excess emissions are inconsistent with the procedures specified in the OMP, the Permittee shall record the actions taken for that event and shall report by phone such actions within two (2) working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the Permittee makes alternative reporting arrangements, in advance, with IDEM, OAQ.

(e) The Permittee shall keep the written OMP on record after it is developed to be made available, upon request, by IDEM, OAQ for the life of tanks on electroplating lines P-1, P-2 and P-3, or until the tank is no longer subject to the provisions of 40 CFR 63.340. In addition, if the OMP is revised, the Permittee shall keep previous versions of the OMPs on record to be made available for inspection, upon request by IDEM, OAQ for a period of five (5) years after each revision to the plan.

Compliance Determination Requirements [326 IAC 2-1.1-11]

D.1.7 Performance Testing [326 IAC 2-1.1-11] [40 CFR 63.343(b)(2)] [40 CFR 63.7] [40 CFR 63.344] [326 IAC 20-8-1]

(a) A performance test demonstrating initial compliance for tanks in electroplating lines P-1 and P-2 were performed on March 18, 1997 and September 9, 1997, respectively.

During the initial performance tests, it was determined that the pressure drop across the composite mesh pad system on electroplating line P-1 was between 1.95 inches and 2.95 inches of water and the pressure drop across the composite mesh pad system on electroplating line P-2 was between 3.20 inches and 4.20 inches of water. As approved by U.S. EPA on February 6, 1998, the pressure drops were revised to between 2.65 inches and 3.65 inches of water for the composite mesh pad on electroplating line P-1 and between 4.00 inches and 5.00 inches of water for the composite mesh pad on electroplating line P-2.

(b) The Permittee is not required to further test tanks in electroplating lines P-1 and P-2 by this permit. However, the IDEM may require testing when necessary to determine if the tanks are in compliance. If testing is required by the IDEM, compliance with the limits specified in Condition D.1.3 shall be determined by a performance test conducted in accordance with 40 CFR 63.344 and Section C - Performance Testing.

(c) The Permittee is required to conduct an initial performance test within 180 days after startup of tanks in electroplating line P-3 using the procedures and methods in 40 CFR 63.344 and 40 CFR 63.7 and in accordance with Section C - Performance Testing.

(d) Any change, modification, or reconstruction of the tanks in electroplating lines P-1, P-2, and P-3, the composite mesh pads, wet scrubber, or monitoring equipment may require additional performance testing conducted in accordance with 40 CFR 63.344 and Section C - Performance Testing.

D.1.8 Establishing Site-Specific Operating Parameter Values [40 CFR 63.343(c)] [40 CFR 63.344(d)] [326 IAC 20-8-1]

During the initial performance test for electroplating line P-3 and pursuant to 40 CFR 63.343(c)(1)(i), when using a composite mesh-pad system to comply with the limit specified in Condition D.1.3, the Permittee shall determine the outlet chromium concentration using the test methods in 40 CFR 63.344(c) and shall establish as a site-specific operating parameter the pressure drop across the system, setting the value that corresponds to compliance with the applicable emission limitation using the procedures in 40 CFR 63.344(d)(4) and (5). The Permittee may conduct multiple performance tests to establish a range of compliant pressure drop values, or may set as the compliant value the average pressure drop measured over the three test runs of one performance test, and accept ±1 inch of water column from this value as the compliant range.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.9 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)] [40 CFR 63.343(c)] [326 IAC 20-8-1]

(a) Pursuant to 40 CFR 63.343(c)(1)(ii), when using a composite mesh-pad system to comply with the limits specified in Condition D.1.3, the Permittee shall monitor and record the pressure drop across the composite mesh-pad systems during tank operation once each day that the hard chromium electroplating tanks in electroplating lines P-1, P-2, and P-3 are operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant values for pressure drop established during multiple performance tests.

(b) Tank operation or operating time is defined as that time when a part is in the tank and the rectifier is turned on. If the amount of time that no part is in the tank is fifteen minutes or longer, that time is not considered operating time. Likewise, if the amount of time between placing parts in the tank (i.e., when no part is in the tank) is less than fifteen minutes, that time between plating the two parts is considered operating time.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.10 Record Keeping Requirements [40 CFR 63.346] [326 IAC 20-8-1]

The Permittee shall maintain records to document compliance with Conditions D.1.3, D.1.4 and D.1.6 using the forms provided with this permit. These records shall be maintained in accordance with Section C - General Record Keeping Requirements of this permit and include a minimum of the following:

(a) Inspection records for the composite mesh pads, and monitoring equipment to document that the inspection and maintenance required by Conditions D.1.7 and D.1.9 have taken place. The record can take the form of a checklist and should identify the following:

(1) The device inspected;

(2) The date of inspection;

(3) A brief description of the working condition of the device during the inspection, including any deficiencies found; and

(4) Any actions taken to correct deficiencies found during the inspection, including the date(s) such actions were taken.

(b) Records of all maintenance performed on tanks in electroplating lines P-1, P-2, and P-3, the composite mesh pads, and monitoring equipment.

(c) Records of the occurrence, duration, and cause (if known) of each malfunction of tanks in electroplating lines P-1, P-2, and P-3, the composite mesh pad, and monitoring equipment.

(d) Records of the occurrence, duration, and cause (if known) of each period of excess emissions of tanks in electroplating lines P-1, P-2, and P-3, the composite mesh pads, and monitoring equipment as indicated by monitoring data collected in accordance with this condition.

(e) Records of actions taken during periods of malfunction or excess emissions when such actions are inconsistent with the OMP.

(f) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the OMP.

(g) Test reports documenting results of all performance tests.

(h) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance.

(i) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.

(j) The total process operating time, as defined in Condition D.1.9(b), of each tank, during the reporting period.

(k) Records of the actual cumulative rectifier capacity of each hard chromium electroplating tank expended during each month of the reporting period, and the total capacity expended to date for a reporting period.

(l) All documentation supporting the notifications and reports required by 40 CFR 63.9 and 63.10 (Subpart A, General Provisions) and by Condition D.1.11.

D.1.11 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347] [326 IAC 20-8-1]

The notifications and reports required in this section shall be submitted to IDEM, OAQ using the address specified in Section C - General Reporting Requirements.

(a) Notifications:

(1) Initial Notifications
The Permittee shall submit an Initial Notification for each new or reconstructed tank as follows:

(A) A notification of the actual date when construction or reconstruction of tanks in electroplating lines P-1, P-2, or P-3 commenced shall be submitted no later than thirty (30) days after such date.

(B) A notification of the actual date of startup of tanks in electroplating lines P-1, P-2, or P-3 shall be submitted within thirty (30) days after such date.

(2) Notification of Performance Test
The Permittee shall notify IDEM, OAQ in writing of their intention to conduct a performance test for electroplating line P-3 at least sixty (60) days before the test is scheduled to begin.

(A) Pursuant to Section C - Performance Testing, a test protocol shall be submitted no later than thirty-five (35) days prior to the intended test date.

(B) In the event the Permittee is unable to conduct the performance test as scheduled, pursuant to 40 CFR 63.7(b)(2) the Permittee shall notify IDEM, OAQ within five (5) days prior to the scheduled performance test date and specify the date when the performance test is rescheduled. Pursuant to Section C - Performance Testing, the rescheduled performance test date shall be no sooner than fourteen (14) days after IDEM, OAQ is notified in writing of the need to reschedule.

(3) A Notification of Compliance Status (NCS) is required each time that the facility becomes subject to the requirements of 40 CFR Part 63 Subpart N.

(A) The NCS shall be submitted to IDEM, OAQ, and shall list, for each tank, the information identified in 40 CFR 63.347(e)(2).

(B) The NCS for tanks in electroplating line P-3 shall be submitted to IDEM, OAQ no later than forty-five (45) days following completion of the compliance demonstration pursuant to Section C - Performance Testing.

(4) Notification of Construction or Reconstruction
Pursuant to 40 CFR 63.345(b)(1), the Permittee may not construct a new tank subject to 40 CFR 63, Subpart N (including non-affected tanks defined in 40 CFR 63.344(e)) without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAQ. In addition, the Permittee may not change, modify, or reconstruct tanks in electroplating lines P-1, P-2, and P-3

without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAQ.

(A) The NCR shall contain the information identified in 40 CFR 63.345(b) (2) and (3).

(B) A change, modification, or reconstruction of this facility includes any change in the air pollution control techniques, the addition of add-on control devices, or the construction of duct work for the purpose of controlling both existing tanks and non-affected facilities by a common control technique or device [i.e., the addition of duct work to the CMP system].

(C) A complete application to construct new chromium electroplating or chromium anodizing tanks serves as this notification. Likewise, the complete application to modify or reconstruct electroplating lines P-1, P-2 and P-3 serves as this notification.

(D) Pursuant to 326 IAC 2-1.1-2(a), permission must be received from IDEM, OAQ before construction, modification, or reconstruction may commence.

(b) Performance Test Results
The Permittee shall document results from the initial performance test for electroplating line P-3 and any future performance tests in a complete test report that contains the information required in 40 CFR 344(a).

The Permittee shall submit reports of performance test results as part of the Notification of Compliance Status, described in 40 CFR 63.347(e), no later than forty-five (45) days following the completion of the performance test.

(c) Ongoing Compliance Status Report
The Permittee shall prepare summary reports to document the ongoing compliance status of electroplating lines P-1, P-2, and P-3 using the Ongoing Compliance Status Report form provided with this permit. This report shall contain the information specified in 40 CFR 63.347(g)(3).

Because electroplating lines P-1, P-2, and P-3 located at site that is an area source of hazardous air pollutants (HAPs), the Ongoing Compliance Status Report shall be retained on site and made available to IDEM, OAQ upon request.

(1) The Ongoing Compliance Status Report shall be completed according to the following schedule except as provided in paragraphs (c)(2).

(A) The first report shall cover the period from the issuance date of this permit to December 31 of the year in which the permit is issued.

(B) Following the first year of reporting, the report shall be completed on a calendar year basis with the reporting period covering from January 1 to December 31.

(2) If either of the following conditions are met, semiannual reports shall be prepared and submitted to IDEM, OAQ:

(A) The total duration of excess emissions (as indicated by the monitoring data collected by the Permittee in accordance with 40 CFR 63.343(c)) is one percent (1%) or greater of the total operating time as defined in Condition D.1.9(b) for the reporting period; or

(B) The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is five percent (5%) or greater of the total operating time as defined in Condition D.1.9(b).

Once the Permittee reports an exceedance as defined above, Ongoing Compliance Status Reports shall be submitted semiannually until a request to reduce reporting frequency in accordance with 40 CFR 63.347(g)(2) is approved.

(3) IDEM, OAQ may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description:

(c) Four (4) spray paint booths, identified as FA-1, FA-2, FA-3 and FA-4, each using an electrostatic air atomization spray gun and with particulate matter emissions controlled using dry filters. The maximum throughput capacity for each spray booth is as follows:

(1) FA-1 has a maximum throughput capacity of 206 metal parts per hour, exhausting at stacks E300-PB and E300-TU;

(2) FA-2 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack J400-TU;

(3) FA-3 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack K220-TU; and

(4) FA-4 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack L220-TU.

(d) Two (2) dip coating lines, identified as E-Coat 1 and E-Coat 2, having maximum throughput capacities of 550 outer shells per hour and 600 outer shells per hour, respectively.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating applied in the spray paint operations (FA-1, FA-2, FA-3, and FA-4) and dip coating operations (E-Coat 1 and E-Coat 2) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, as delivered to the applicator for any calender day, for forced warm air (less than 90EC or 194 EF) dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.2.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM emissions from the spray paint operations (FA-1, FA-2, FA-3 and FA-4) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.2.3 Hazardous Air Pollutants (HAPs)

The potential to emit hazardous air pollutants (HAPs) from the spray painting booths and dip coating lines is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year for any combination of HAPs. Any changes to the spray painting or dip coating operations that would increase the potential to emit for the entire source to greater than ten (10) tons per year for a single HAP or twenty-five (25) tons per year for any combination of HAPs shall require prior approval from IDEM, OAQ.

D.2.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the painting operations and any control devices.

Compliance Determination Requirements

D.2.5 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.2.2 and the VOC limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.2.6 Volatile Organic Compounds (VOC)

Compliance with the VOC content limitation contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.2.7 Particulate Matter (PM)

The dry filters used for PM control shall be in operation at all times when the spray paint operations (FA-1, FA-2, FA-3 and FA-4) are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.8 Monitoring

(a) Daily inspections shall be performed to verify the placement, integrity and particle loading of the filters. To monitor the performance of the dry filters, weekly observations shall be made of the overspray from the surface coating booth stacks (E300-PB, E300-TU, J400-TU, K220-TU, and L220-TU) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.9 Record Keeping Requirements

(a) To document compliance with Conditions D.2.1 and D.2.3, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.2.1.

(1) The VOC and HAP content of each coating material used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(2) A log of the dates of use;

(3) The cleanup solvent usage for each month;

(4) The total VOC and HAP usage for each month; and

(5) The weight of VOCs and HAPs emitted for each compliance period.

(b) To document compliance with Condition D.2.8, the Permittee shall maintain a log of weekly overspray observations, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description:

(e) Five (5) natural gas-fired boilers:

(1) E-Coat 2 Process Boiler, constructed in June 1997, having a maximum heat input capacity of 3.5 MMBtu/hour, exhausting at stack P 100-21G;

(2) Space Heating Boiler No. 1, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L85090;

(3) Space Heating Boiler No. 2, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L-85091;

(4) E-Coat 1 Process Boiler No. 1 (identified as EC1-J300-22A), constructed in June 1991 having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22A;

(5) E-Coat 1 Process Boiler No. 2 (identified as EC1-J300-22B), constructed in June 1991, having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22B;

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.3.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating: Emission Limitations for Facilities Specified in 326 IAC 6-2-1 (d)), particulate emissions from Space Heating Boilers #1 and #2 shall in no case exceed 0.49 pounds of particulate matter per million British thermal units heat input.

(b) Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating: Emission Limitations for Facilities Specified in 326 IAC 6-2-1 (d)), particulate emissions from E-Coat 1 process boilers #1 and #2 shall in no case exceed 0.48 pounds of particulate matter per million British thermal units heat input.

(c) Pursuant to 326 IAC 6-2-4 (Particulate emission limitations for sources of indirect heating: Emission Limitations for Facilities Specified in 326 IAC 6-2-1 (d)), particulate emissions from E-Coat 2 process boiler shall in no case exceed 0.46 pounds of particulate matter per million British thermal units heat input.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these boilers.

Compliance Determination Requirements

D.3.3 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description:

(f) Eleven (11) natural gas-fired heaters and ovens:

(1) E-Coat 1 Cure Oven (identified as EC1-J300-22D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stack J300-22D;

(2) E-Coat 2 Cure Oven (identified as EC2-P100-21D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stacks P100-21D, P100-21E and P100-21F;

(3) Strut Line FA1 Dry-off Oven (identified as FA1-E300-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E300-OV;

(4) Strut Line FA1 Cure Oven (identified as FA1-E400-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E400-OV;

(5) Strut Line FA2 Cure Oven (identified as FA2-J400-OV) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack J400-OV;

(6) Strut Line FA3 Hot Water Heater (identified as FA3-K220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack K220-G;

(7) Strut Line FA3 Cure Oven (identified as FA3-K220-OV) having a maximum heat input capacity 0.30 MMBtu/hour, exhausting at stack K220-OV;

(8) Strut Line FA4 Hot Water Washer (identified as FA4-L220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack L220-G;

(9) Strut Line FA4 Cure Oven (identified as FA4-L220-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack L220-OV;

(10) Strut Line FA5 Washer Heater (identified as FA5-M230-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack M230-G;

(11) Strut Line FA6 Washer Heater (identified as FA6-N210-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack N210-G; and

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

There are no regulations specifically applicable to these emission units.

SECTION D.5 FACILITY OPERATION CONDITIONS

Facility Description:

(g) One (1) natural gas-fired burn-off oven (identified as BO-OV) having a maximum heat input capacity of 0.80 MMBtu/hour, with emissions controlled using an afterburner, exhausting at stack BO-OV.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.5.1 Incinerator Requirements [326 IAC 4-2]

Pursuant to 326 IAC 4-2, the burn-off oven (identified as BO-OV) shall:

(a) Consist of primary and secondary chambers or the equivalent;

(b) Be equipped with a primary burner unless burning wood products;

(c) Comply with 326 IAC 5-1 and 326 IAC 2;

(d) Be maintained properly as specified by the manufacturer and approved by the commissioner;

(e) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;

(f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;

(g) Be operated so that emissions of hazardous material including but not limited to viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;

(h) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard condition corrected to fifty percent (50%) excess air; and

(i) Not create a nuisance or fire hazard.

If any of the above result, the burning shall be terminated immediately.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance Branch

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**KYB Manufacturing North America, Inc.**
Address:	**2625 North Morton**
City:	**Franklin, Indiana 46131**
Phone #:	**317-736-7774**
MSOP #:	**081-12622-00015**

I hereby certify that KYB Manufacturing North America, Inc. is
9 still in operation.
9 no longer in operation.

I hereby certify that KYB Manufacturing North America, Inc. is
9 in compliance with the requirements of MSOP 081-12622-00015.
9 not in compliance with the requirements of MSOP 081-12622-00015.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION:_____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

December 21, 2001

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document for a Minor Source Operating Permit (MSOP)

Source Background and Description

Source Name:	KYB Manufacturing North America, Inc.
Source Location:	2625 North Morton, Franklin, Indiana 46131
County:	Johnson
SIC Code:	3710
Operation Permit No.:	F081-12622-00015
Permit Reviewer:	ERG/AB

On November 14, 2001, the Office of Air Quality (OAQ) had a notice published in the Daily Journal, Franklin, Indiana, stating that KYB Manufacturing North America, Inc. had applied for a Minor Source Operating Permit (MSOP) to operate a chrome electroplating with control. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On November 27 2001, KYB Manufacturing North America, Inc., submitted comments on the proposed MSOP. The summary of the comments is as follows:

The ownership of this company has now officially been changed from Arvin-Kayaba, LLC to KYB Manufacturing North America, Inc. The paperwork is now in place and the official transfer will be retroactive to October 1, 2001.

Response to Comment 1: The permit has been revised to reflect this change of ownership.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted).

1. The OAQ has restructured Condition C.11 to clarify the contents and implementation of the Compliance Response Plan. The language regarding the OAQ's discretion to excuse failure to perform monitoring has been deleted. The OAQ retains this discretion, and it is not necessary to state criteria regarding the exercise of that discretion in the permit.

C.11 Compliance **Response** ~~Monitoring~~ Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to **prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintain on site, and comprised of:** ~~implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:~~

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.

(2) If, at anytime, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition **as follows:** ~~. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.~~

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) ~~After investigating the reason for the excursion, the~~ **The** Permittee is **not required to take any** ~~excused from taking~~ further response steps for any of the following reasons:

(1) **A false reading occurs due to the malfunction of the** ~~The~~ monitoring equipment **and** ~~malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that~~ prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied ~~or;~~**.**

(3) An automatic measurement was taken when the process was not operating ~~or;~~**.**

(4) The process has already returned to operating within “normal” parameters and

no response steps are required.

~~(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.~~

(d) The Permittee shall record all instances when response steps are taken.

(e) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

2. References to 326 IAC 2-8-4(10) were incorrectly included in the facility description box in each D section (pages 19, 24, 27, 28 and 29). This reference is applicable only to Federally Enforceable State Operating Permits (FESOPs). These references have been deleted from the final permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit

Source Background and Description

Source Name:	Arvin-Kayaba, LLC
Source Location:	2625 North Morton, Franklin, Indiana 46131
County:	Johnson
SIC Code:	3710
Operation Permit No.:	081-12622-00015
Permit Reviewer:	ERG/AB

The Office of Air Quality (OAQ) has reviewed an application from Arvin-Kayaba, LLC relating to the construction and operation of a hard chrome electroplating plant used to manufacture piston rods for automotive struts.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) hard chrome electroplating line (identified as P-1), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H300-A.

(b) One (1) hard chrome electroplating line (identified as P-2), constructed in 1997, consisting of six (6) rectifiers each having a maximum capacity of 6,000 Amps, with emissions controlled using a composite mesh pad wet scrubber. This electroplating line has a maximum throughput capacity of 550 piston rods per hour. Emissions are exhausted through stack H200-A.

(c) Four (4) spray paint booths, identified as FA-1, FA-2, FA-3 and FA-4, each using an electrostatic air atomization spray gun and with particulate matter emissions controlled using dry filters. The maximum throughput capacity for each spray booth is as follows:

(1) FA-1 has a maximum throughput capacity of 206 metal parts per hour, exhausting at stacks E300-PB and E300-TU;

(2) FA-2 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack J400-TU;

(3) FA-3 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack K220-TU; and

(4) FA-4 has a maximum throughput capacity of 240 metal parts per hour, exhausting at stack L220-TU.

(d) Two (2) dip coating lines, identified as E-Coat 1 and E-Coat 2, having maximum throughput capacities of 550 outer shells per hour and 600 outer shells per hour, respectively.

(e) Five (5) natural gas-fired boilers:

(1) E-Coat 2 Process Boiler, constructed in June 1997, having a maximum heat input capacity of 3.5 MMBtu/hour, exhausting at stack P 100-21G;

(2) Space Heating Boiler No. 1, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L85090;

(3) Space Heating Boiler No. 2, constructed in June 1988, having a maximum heat input capacity of 10.461 MMBtu/hour, exhausting at stack L-85091;

(4) E-Coat 1 Process Boiler No. 1 (identified as EC1-J300-22A), constructed in June 1991 having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22A;

(5) E-Coat 1 Process Boiler No. 2 (identified as EC1-J300-22B), constructed in June 1991,having a maximum heat input capacity of 1.69 MMBtu/hour, exhausting at stack J300-22B;

(f) Eleven (11) natural gas-fired heaters and ovens:

(1) E-Coat 1 Cure Oven (identified as EC1-J300-22D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stack J300-22D;

(2) E-Coat 2 Cure Oven (identified as EC2-P100-21D) having a maximum heat input capacity of 1.59 MMBtu/hour, exhausting at stacks P100-21D, P100-21E and P100-21F;

(3) Strut Line FA1 Dry-off Oven (identified as FA1-E300-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E300-OV;

(4) Strut Line FA1 Cure Oven (identified as FA1-E400-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack E400-OV;

(5) Strut Line FA2 Cure Oven (identified as FA2-J400-OV) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack J400-OV;

(6) Strut Line FA3 Hot Water Heater (identified as FA3-K220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack K220-G;

(7) Strut Line FA3 Cure Oven (identified as FA3-K220-OV) having a maximum heat input capacity 0.30 MMBtu/hour, exhausting at stack K220-OV;

(8) Strut Line FA4 Hot Water Washer (identified as FA4-L220-G) having a maximum heat input capacity of 0.88 MMBtu/hour, exhausting at stack L220-G;

(9) Strut Line FA4 Cure Oven (identified as FA4-L220-OV) having a maximum heat input capacity of 0.30 MMBtu/hour, exhausting at stack L220-OV;

(10) Strut Line FA5 Washer Heater (identified as FA5-M230-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack M230-G;

(11) Strut Line FA6 Washer Heater (identified as FA6-N210-G) having a maximum heat input capacity of 0.80 MMBtu/hour, exhausting at stack N210-G; and

(g) One (1) natural gas-fired burn-off oven (identified as BO-OV) having a maximum heat input capacity of 0.80 MMBtu/hour, with emissions controlled using an afterburner, exhausting at stack BO-OV.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(h) One (1) hard chrome electroplating line (identified as P-3), constructed in 2001, consisting of three (3) rectifiers each having a maximum capacity of 15,000 Amps, with emissions controlled using a composite mesh pad wet scrubber system. This electroplating line has a maximum throughput capacity of 1,000 piston rods per hour. Emissions are exhausted at stack H400-A.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Exemption 081-8131-00015, issued on April 18, 1997.

(b) Registration 081-5266-00015, issued on April 30, 1996.

(c) Registration 081-2244-00015, issued on December 23, 1991.

(d) Amendment to construction permit (41) 1735 and operating permit 41-06-92-0093, issued on June 1, 1992.

(e) Permit Revision to construction permit (41) 1735 and operating permit Permit 41-06-92-0093, issued on May 15, 1992.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

(a) IDEM OAQ is aware that this source is not in compliance with 326 IAC 2-6.1-3 which required the source to submit a permit application by December 1999.

(b) IDEM, OAQ is reviewing the matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operating permit rules.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
H300-A	Plating Line 1 Composite Mesh Pad	40	3	26,000	94
H200-A	Plating Line 2 Composite Mesh Pad	40	3	26,000	94
H400-A	Plating Line 3 Composite Mesh Pad	35-40	1.93	16,500	85-110

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
J300-22A	E-Coat 1 Process Boiler	40	1	4,800	150
J300-22B	E-Coat 1Process Boiler	40	1	4,800	150
J300-22D	E-Coat 1 Blow-off	40	1	4,800	150
J300-22C	E-Coat 1 Cure Oven	40	1	4,800	150
P100-21A	E-Coat 2 Pretreatment	40	1.5	3,000	120
P100-21B	E-Coat 2 Rinse	40	1.5	3,000	85
P100-21C	E-Coat 2 Pretreatment	40	2.0	4,875	85
P100-21D	E-Coat 2 Cure Painting	40	1	1,000	85
P100-21E	E-Coat 2 Cure Oven	40	1	3,900	450
P100-21F	E-Coat 2 Cure Oven	40	1	1,000	150
P100-21G	E-Coat 2 Process Boiler	40	1	4,800	150
E300-S	FA1 Pretreatment Washer	40	1	1,000	150
E300-PB	Strut Line FA1 Spray Paint Booth	40	1	1,000	85
E300-TU	Strut Line FA1 Touchup	40	1	1,000	85
E300-OV	Strut Line FA1 Dry-off Oven	40	1	1,000	150
E400-OV	Strut Line FA1 Cure Oven	40	1	1,000	150
J400-S	FA2 Pretreatment Washer	40	1	1,000	150
J400-TU	Strut Line FA2 Touchup	40	1	1,000	85
J400-OV	Strut Line FA2 Cure Oven	40	1	1,000	150
K220-S	Strut Line FA3 Hot Water Washer	40	1	1,000	150
K220-G	Strut Line FA3 Hot Water Washer	40	1	1,000	150
K220-TU	Strut Line FA3 Touchup	40	1	1,000	85
K220-OV	Strut Line FA3 Cure Oven	40	1	1,000	150
L220-S	Strut Line FA4 Hot Water Washer	40	1	1,000	150
L220-G	Strut Line FA4 Hot Water Washer	40	1	1,000	150
L220-TU	Strut Line FA4 Touchup	40	1	1,000	85
L220-OV	Strut Line FA4 Cure Oven	40	1	1,000	150
M230-S	Strut Line FA5 Hot Water Washer	40	1	1,000	150
M230-G	Strut Line FA5 Dry-off Oven	40	1	1,000	150
N210-S	Srut Line FA6 Hot Water Washer	40	1	1,000	150
N210-G	Strut Line FA6 Washer Heater	40	1	1,000	150
BO-S	Burn-off Boiler	40	1	1,000	150
BO-OV	Burn-off Oven	40	1	1,000	150
L-85090	Space Heater Boiler No.1	40	2	3,000	150
L-85091	Space Heater Boiler No.2	40	2	3,000	150

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 16, 2000, with additional information received on May 7, 2001 and May 25, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 35).

Potential To Emit of Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	19.1
PM-10	19.1
SO_2	0.098
VOC	10.6
CO	13.7
NO_x	16.7

HAP's	Potential To Emit (tons/year)
Glycol Ether	3.9
Chromium Compounds	5.89
Cobalt Compounds	0.10
TOTAL	9.89

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) Pursuant to 326 IAC 2-5.1-3(a)(2)(A), this source is subject to the provisions of 326 IAC 2-6-1 because the source operates chromium electroplating tanks.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year, therefore, the source is not subject to the provisions of 326 IAC 2-7.

(d) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD.

County Attainment Status

The source is located in Johnson County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Johnson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Johnson County has been classified as attainment or unclassifiable for PM-10, SO_2, CO and lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.08
PM10	1.08
SO_2	0.098
VOC	10.6
CO	13.7
NO_x	16.7

(a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on information provided by the source in their application for this permit.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This existing source, including the emissions from this permit MSOP-081-12622-00015, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) The Space Heating Boilers No.1 and No.2 are not subject to the requirements of the New Source Performance Standard, 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (326 IAC 12) because they were constructed prior to June 9, 1989.

Process boilers for E-Coat 1 and E-Coat 2 are not subject to the requirements of 40 CFR 60, Subpart Dc, because they each have maximum heat input capacities less than 10 MMBtu per hour.

(b) The chrome electroplating lines P-1, P-2, and P-3 are subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart N - National Emissions Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks.

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart N.

The chromium electroplating operations are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 326 IAC 14, (40 CFR 63, Subpart N, and 326 IAC 20-1-1). Pursuant to 40 CFR 63, Subpart N, and 326 IAC 20-1-1, the chromium electroplating operations are subject to the following conditions:

(1) **Emission Limitations:**

The hard chromium electroplating tanks on electroplating lines P-1 and P-2 are considered large, existing hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm [6.6×10^{-6} gr/dscf].

The hard chromium electroplating tanks on electroplating line P-3 is considered a large, new hard chromium electroplating operation. During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from the tanks by not allowing the concentration of total chromium in the exhaust gas stream discharged to the atmosphere to exceed 0.015 mg/dscm [6.6×10^{-6} gr/dscf].

The emission limitations in this condition apply during tank operation and during periods of startup and shutdown as these are routine occurrences for tanks subject to 326 IAC 20-8-1. The emission limitations do not apply during periods of malfunction.

(2) **Compliance Monitoring Requirements:**

Pursuant to 40 CFR 63.343(c)(1)(ii), when using a composite mesh-pad system to comply with the limits specified above, the Permittee shall monitor and record the pressure drop across the composite mesh-pad systems during tank operation once each day that the hard chromium electroplating tanks in electroplating lines P-1, P-2, and P-3 are operating. To be in compliance with the standards, the composite mesh-pad system shall be operated within ±1 inch of water column of the pressure drop value established during the initial performance test, or within the range of compliant values for pressure drop established during multiple performance tests.

(4) **Reporting Requirements:**

A summary report shall be prepared to document the ongoing compliance status of the chromium electroplating operation. This report shall be completed annually, retained on site, and made available to IDEM upon request. If there are significant exceedance of chromium air emission limits (as defined in 40 CFR Part 63.347(h)(2)), then semiannual reports shall be submitted to:

Indiana Department of Environmental Management
Air Compliance Branch, Office of Air Quality
Chromium Electroplating
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206

(5) **Record Keeping and Reporting:**

The chromium electroplating operations shall be subject to the record keeping and reporting requirement as indicated in the chromium electroplating NESHAP.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Johnson County and the potential to emit PM-10, CO, VOC, NOx, and SO_2 is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Surface Coating Operations

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the new chrome electroplating line (identified as P-3) will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

The new chrome electroplating line (identified as P-3) does not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the spray painting operations (identified as FA-1, FA-2, FA-3, and FA-4) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filters shall be in operation at all times the spray painting operations are in operation, in order to comply with this limit.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the dip coating lines (identified as E-Coat 1 and E-Coat 2) and the spray painting operations (identified as FA-1, FA-2, FA-3, and FA-4) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the dip coating lines and spray painting operations are in compliance with this requirement.

These emission units are subject to 326 IAC 8-2-9 because the potential to emit VOC is greater than 15 pounds per day.

326 IAC 2-7 (Hazardous Air Pollutants (HAPs))

The potential to emit hazardous air pollutants (HAPs) from the spray painting booths and dip coating lines is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year for any combination of HAPs. Any changes to the spray painting or dip coating operations that would increase the potential to emit any single HAP to greater than ten (10) tons per year or any combination of HAPs to greater than twenty-five (25) tons per year for the entire source shall require prior approval from IDEM, OAQ.

State Rule Applicability - Burn-off Oven

326 IAC 4-2 (Incinerators)

Pursuant to 326 IAC 4-2, the pyrolysis cleaning furnace shall:

(a) Consist of primary and secondary chambers or the equivalent;

(b) Be equipped with a primary burner unless burning wood products;

(c) Comply with 326 IAC 5-1 and 326 IAC 2;

(d) Be maintained properly as specified by the manufacturer and approved by the commissioner;

(e) Be operated according to the manufacturer's recommendations and only burn waste approved by the commissioner;

(f) Comply with other state and/or local rules or ordinances regarding installation and operation of incinerators;

(g) Be operated so that emissions of hazardous material including but not limited to viable pathogenic bacteria, dangerous chemicals or gases, or noxious odors are prevented;

(h) Not emit particulate matter in excess of five-tenths (0.5) pounds of particulate matter per one thousand (1,000) pounds of dry exhaust gas at standard condition corrected to fifty percent (50%) excess air; and

(i) Not create a nuisance or fire hazard.

If any of the above result, the burning shall be terminated immediately.

State Rule Applicability - Boilers

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the E-Coat 1 Process Boilers #1 and #2 shall be limited to 0.48 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) of heat input
Q = Total source maximum operating capacity rating in MMBtu per hour heat input (24.3 MMBtu/hr Maximum Combined heat input capacity for the E-Coat 1 process boilers and space heating boilers #1 and #2).

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the Space Heating Boilers #1 and #2 shall be limited to 0.49 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) of heat input
Q = Total source maximum operating capacity rating in MMBtu per hour heat input (20.92 MMBtu/hr Maximum Combined heat input capacity for the two Space Heating Boilers #1 and #2).

326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the E-Coat 2 Process Boiler shall be limited to 0.46 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

where Pt = Pounds of particulate matter emitted per million Btu (lb/MMBtu) of heat input

Q = Total source maximum operating capacity rating in MMBtu per hour heat input (27.8 MMBtu/hr Maximum Combined heat input capacity for the E-Coat 2 process boilers, the two E-Coat process boilers, and the two space heating boilers).

Conclusion

The construction and operation of this hard chrome electroplating facility shall be subject to the conditions of the attached proposed Minor Source Operating Permit 081-12622-00015.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 1 Process Boiler (ECI-J300-22A)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.69	14.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.056	0.056	0.004	0.740	0.041	0.622

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 1 Process Boiler (ECI-J300-22A)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.554E-05	8.883E-06	5.552E-04	1.332E-02	2.517E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.701E-06	8.142E-06	1.036E-05	2.813E-06	1.554E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 1 Process Boiler #2 (ECI-J300-22B)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.69	14.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.056	0.056	0.004	0.740	0.041	0.622

*PM emission factor is filterable and condensable PM combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 1 Process Boiler #2 (ECI-J300-22B)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.554E-05	8.883E-06	5.552E-04	1.332E-02	2.517E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.701E-06	8.142E-06	1.036E-05	2.813E-06	1.554E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E- Coat 1 Cure Oven (ECI- J300-22D)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.59	13.9

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.053	0.053	0.004	0.696	0.038	0.585

*PM emission factor is filterable and condensable PM combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E- Coat 1 Cure Oven (ECI- J300-22D)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.462E-05	8.357E-06	5.223E-04	1.254E-02	2.368E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.482E-06	7.661E-06	9.750E-06	2.646E-06	1.462E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 2 Cure Oven (EC2-P100-21D)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
1.59	13.9

Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.053	0.053	0.004	0.696	0.038	0.585

*PM emission factor is filterable and condensable PM combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
E-Coat 2 Cure Oven (EC2-P100-21D)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.462E-05	8.357E-06	5.223E-04	1.254E-02	2.368E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.482E-06	7.661E-06	9.750E-06	2.646E-06	1.462E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FAI Dry-off Oven (FAI-E300-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.3	2.6

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.010	0.010	0.001	0.131	0.007	0.110

*PM emission factor is filterable and condensable PM combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FAI Dry-off Oven (FAI-E300-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.759E-06	1.577E-06	9.855E-05	2.365E-03	4.468E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-07	1.445E-06	1.840E-06	4.993E-07	2.759E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FAI Cure Oven (FAI-E400-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.3	2.6

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.010	0.010	0.001	0.131	0.007	0.110

*PM emission factor is filterable and condensable PM combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FAI Cure Oven (FAI-E400-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.759E-06	1.577E-06	9.855E-05	2.365E-03	4.468E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-07	1.445E-06	1.840E-06	4.993E-07	2.759E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **2625 North Morton, Franklin, IN 46131**
CP: **081-12622-00015**
Plt ID: **00015**
Reviewer: ERG/AB
Date: 11/20/00

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
CF590-534 (E-Coat)	9.2	65.72%	59.6%	6.1%	0.0%	26.72%	0.00110	1100.000	0.50	0.56	0.68	16.28	2.97	0.00	2.10	100%
H68BC507 (Touch-up)	9.4	25.30%	0.0%	25.3%	0.0%	30.00%	0.00055	1100.000	2.37	2.37	1.44	34.46	6.29	5.57	7.91	70%
Cleaning Solvent	8.1	100.00%	77.0%	23.0%	75.0%	0.00%	4.57E-05	1100.000	7.48	1.87	0.09	2.26	0.41	0.00		0%
PTE											**2.21**	**53.00**	**9.67**	**5.57**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used

Appendix A: Emission Calculations
HAP Emission Calculations
For the Spray Painting Booth and Dip Coat Line
Company Name: Arvin-Kayaba, LLC
Address City IN Zip: 2625 North Morton, Franklin, IN 46131
CP#: 081-12622-00015
Plt ID: 00015
Permit Reviewer: ERG/AB
Date: 11/20/00

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Cobalt Compound	Weight % Glycol Ethers	Cobalt Compound Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)
Cleaning Solvent	8.13	4.57E-05	1100.00	0.00%	23.00%	0.00	0.41
H68BC507	9.4	0.001100	1100.00	0.20%	7.00%	0.10	3.49
CF590-534	9.2	0.001100	1100.00	0.00%	0.00%	0.00	0.00
Maximum Potential Emissions						**0.10**	**3.90**

METHODOLOGY

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA2 Cure Oven (J400-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.88	7.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.029	0.029	0.002	0.385	0.021	0.324

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA2 Cure Oven (J400-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.094E-06	4.625E-06	2.891E-04	6.938E-03	1.310E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.927E-06	4.240E-06	5.396E-06	1.465E-06	8.094E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA3 Hot Water Washer (FA3-K220-G)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.88	7.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.029	0.029	0.002	0.385	0.021	0.324

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA3 Hot Water Washer (FA3-K220-G)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.094E-06	4.625E-06	2.891E-04	6.938E-03	1.310E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.927E-06	4.240E-06	5.396E-06	1.465E-06	8.094E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA3 Cure Oven (FA3-K220-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.30	2.6

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.010	0.010	0.001	0.131	0.007	0.110

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA3 Cure Oven (FA3-K220-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.759E-06	1.577E-06	9.855E-05	2.365E-03	4.468E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-07	1.445E-06	1.840E-06	4.993E-07	2.759E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA5 Washer Heater (FA5-M230-G)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.80	7.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.027	0.027	0.002	0.350	0.019	0.294

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA5 Washer Heater (FA5-M230-G)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	7.358E-06	4.205E-06	2.628E-04	6.307E-03	1.191E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.752E-06	3.854E-06	4.906E-06	1.332E-06	7.358E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA4 Hot Water Washer (FA4-L220-G)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.88	7.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.029	0.029	0.002	0.385	0.021	0.324

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA4 Hot Water Washer (FA4-L220-G)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	8.094E-06	4.625E-06	2.891E-04	6.938E-03	1.310E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.927E-06	4.240E-06	5.396E-06	1.465E-06	8.094E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA4 Cure Oven (FA4-L220-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.30	2.6

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.010	0.010	0.001	0.131	0.007	0.110

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA4 Cure Oven (FA4-L220-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.759E-06	1.577E-06	9.855E-05	2.365E-03	4.468E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.570E-07	1.445E-06	1.840E-06	4.993E-07	2.759E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Washer Heater (FA6-N210-G)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.80	7.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.027	0.027	0.002	0.350	0.019	0.294

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Washer Heater (FA6-N210-G)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	7.358E-06	4.205E-06	2.628E-04	6.307E-03	1.191E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.752E-06	3.854E-06	4.906E-06	1.332E-06	7.358E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Washer Heater (FA6-N210-G)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.80	7.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.027	0.027	0.002	0.350	0.019	0.294

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Washer Heater (FA6-N210-G)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	7.358E-06	4.205E-06	2.628E-04	6.307E-03	1.191E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.752E-06	3.854E-06	4.906E-06	1.332E-06	7.358E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Burn-off Oven (BO-OV)

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.80	7.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.027	0.027	0.002	0.350	0.019	0.294

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Strut Line FA6 Burn-off Oven (BO-OV)
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	7.358E-06	4.205E-06	2.628E-04	6.307E-03	1.191E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.752E-06	3.854E-06	4.906E-06	1.332E-06	7.358E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations

Chrome Electroplating

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 06/01/01

Plating Line	Maximum Annual Cumulative Potential Rectifier Capacity (A-hr)	Emission Factors (grains/A-hr)*		Emissions Before Controls (tons/yr)		Emissions After Controls (tons/yr		Control Device
		Chromium Compounds	Total PM = PM10	Chromium Compounds	Total PM = PM10	Chromium Compounds	Total PM = PM10	
1	211,680,000	0.12	0.25	1.81	3.78	0.000181	0.000378	Composite Mesh Pad Scrubber (99.99% Efficient)
2	211,680,000	0.12	0.25	1.81	3.78	0.000181	0.000378	Composite Mesh Pad Scrubber (99.99% Efficient)
3	264,600,000	0.12	0.25	2.27	4.72	0.000227	0.000472	Packed Bed Scrubber (99.99% Efficient)
Totals				5.89	12.27	0.00059	0.00123	

* Emission factors are from AP-42, section 12.2, July 1996.

Uncontrolled Emissions (tons/yr) = Annual Rectier Capacity (A-hr) x Emission Factor (grains/A-hr)
x 64.8 mg/grain x 1lb/454000 mg x 1 ton/2000 lb

Maximum Annual Cumulative Potential Rectifier Capacity (A-hr) = Max. Amps for Rectifier x 8400 hr/yr x 0.7
Calculated based on method described in 40 CFR 63, Subpart N.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Three Small Boilers

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
24.40	213.7

Includes three boilers with heat input of 3.5MMBtu/hr, 10.461MMBtu/hr and 10.461MMBtu/hr.

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.812	0.812	0.064	10.687	0.588	8.977

*PM emission factor is filterable and condensable PM.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Three Small Boilers
HAPs Emissions

Company Name: **Arvin-Kayaba, LLC**
Address City IN Zip: **Franklin, IN 46131**
CP: **081-12622**
Plt ID: **081-00015**
Reviewer: ERG/AB
Date: 05/30/01

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.244E-04	1.282E-04	8.015E-03	1.924E-01	3.634E-04

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	5.344E-05	1.176E-04	1.496E-04	4.061E-05	2.244E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.